IN THE CLAIMS:

1. (CURRENTLY AMENDED) An irrigation control system for land comprising:

~~(a) at least one meter to measure one or more weather conditions in a first area;~~

~~(b)~~ (a) at least one monitor to (i) examine rainfall data derived from a radar scanning at least ~~the~~ a first area according to predetermined criteria and (ii) to extract weather data which is representative of the scanned rainfall in a sub-area of the first area;

~~(c)~~ (b) a storage device to store the extracted data; and

~~(d)~~ (c) a controller connected directly or indirectly to the ~~meter and the~~ monitor and to the storage device to calculate a moisture content value for the sub-area based on said rainfall data, and to regulate the irrigation in a sub-area in accordance with said moisture content.

2. (ORIGINAL) The irrigation control system of claim 1 wherein regulation of irrigation in the sub-area is either by initiating or preventing irrigation of the sub-area depending upon whether the moisture content value is less than or more than the predetermined moisture content value for the sub-area.

3. (PREVIOUSLY AMENDED) The irrigation system of claim 1 wherein there is one monitor.

4. (PREVIOUSLY AMENDED) The irrigation system of claim 1 wherein the weather conditions measured include solar radiation.

5. (PREVIOUSLY AMENDED) The irrigation system of claim 1 wherein the monitor is integrated with the controller.

6. (PREVIOUSLY AMENDED) The irrigation system of claim 1 wherein the controller is a computer.

7 (PREVIOUSLY AMENDED) The irrigation system of claim I wherein the irrigation control system further comprises a local switch in the sub-area to initiate or prevent irrigation in response to signals from the controller.

8 (ORIGINAL) The irrigation system of claim 7 wherein the local switch in the sub-area activates or de-activates a local controller for initiating or preventing the irrigation, in response to signals from the controller.

9. (PREVIOUSLY AMENDED) The irrigation system of claim 7 wherein the irrigation control system further comprises an interruptor to interrupt irrigation in the sub-area.

10. (ORIGINAL) The irrigation system of claim 9 wherein the interruptor interrupts irrigation in the sub-area in response to rainfall in the

sub-area.

11. (PREVIOUSLY AMENDED) The irrigation system of claim 9 wherein the interruption occurs for a period of time determined by the controller.

12. (CURRENTLY AMENDED) A method of irrigating land is provided comprising

the steps of:

(a) measuring one or more weather conditions in a first area;

(b) examining rainfall data derived from a radar scanning at least the first area according to predetermined criteria and extracting weather data which is representative of the scanned ~~data~~ rainfall in a sub-area of the first area;

(c) storing the extracted data;

(d) calculating a moisture content value for the sub-area based on said rainfall and a predetermined moisture content value for the sub-area; and

(e) regulating the irrigation of the sub-area.

13. (ORIGINAL) The method of claim 12 wherein the regulation of the irrigation of the sub-area is either by initiating or preventing irrigation of the sub-area depending upon whether the moisture content value is less than or more than the predetermined moisture content value for the sub-area.

14. (PREVIOUSLY AMENDED) The method of claim 12 wherein the measurement in step (a) is carried out in the same sub-area as that in which the measurement is carried out in step (b).

15. (PREVIOUSLY AMENDED) The method of claim 12 wherein the method comprises a further step of: (f) sensing for rainfall in the sub-area during irrigation and interrupting irrigation in response to rainfall in the sub-area for a period of time controlled by the duration and amount of rainfall.

16. (CURRENTLY AMENDED) The irrigation system of claim 2 further comprising at least one meter to measure one or more weather conditions in said first area wherein the weather conditions measured include solar radiation.

17. (ADDED PREVIOUSLY) The irrigation system of claim 10 wherein the interruption occurs for a period of time determined by the controller.